EVOLUTION

2007-‘08 GMT900 4.8L, 5.3L, 6.0L, & 6.2L GM

Edge Evolution

Installation Instructions & Manual

P/N: 25060

EDGE PRODUCTS

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IMPORTANT SAFETY INFORMATION

SAFETY TERMS

Throughout this User Guide (hereafter referred to as User Manual or Manual) you will see important messages regarding your safety or the protection of your vehicle. These messages will be designated by the words WARNING or CAUTION.

WARNING indicates a condition that may cause serious injury or death to you, your passengers or others nearby. Pay careful attention to these Warning messages, and always comply with them. They could save a life.

CAUTION indicates a condition that could cause damage to your vehicle. It is important to install and operate your EDGE product in conformance with instructions in this Manual. Caution messages alert you to particularly important things to watch for to keep your vehicle operating the way you want it to.

The Edge product you have bought is a high-performance product. As such, it does present some risks of which you should be fully aware. Do not use this product until you have carefully read all the following safety information and the Owner Agreement.

WARNING

Misapplication or misuse of this product could lead to a serious or fatal accident. Comply with all safety information below, and in your vehicle owner's manual. Follow safety, installation and operating instructions in this User

SAFETY GUIDELINES

1. Do not exceed legal speed limits on public roadways. Use any enhanced speed capabilities of this product only in closed circuit, legally sanctioned racing environments expressly for this purpose. Loss of control from speeding on a public road could seriously injure you, your passengers, or others on the roadway.

2. Select a position on the windshield or dashboard to mount the device where it will not impair your view. You must be able to see the road, traffic, and pedestrians without interference. Be sure your mounting location meets state and local laws regarding placement of devices on the windshield or dashboard.

3. Do not operate the device while driving. Perform all adjustments or changes while stopped. Changing a setting while under way can interfere with your attention to roadway conditions.

4. "Stacking" performance-enhancing devices or other improper installation could cause powertrain failure on the road. Other products may have features incompatible with your Edge device. Follow all installation and operating instructions, and don't stack products.

5. Some modifications may affect other parts of your vehicle. For example, if you remove/adjust the speed limiter in your vehicle, be sure your tires and other components are rated for the increased speeds they will have to withstand. Not doing so can lead to loss of vehicle control. Modify the speed limiter only for use in closed circuit, legally sanctioned racing environments, not for use on public roadways.

6. Do not use the Performance Tests feature to break any traffic laws. Perform these tests only where they are legal and safe.

7. Some features may not function on all vehicle models. Check a newly-installed device for all features you intend to use. Do not rely on their working without checking first.

NOTE: *Dispose of this product consistent with local codes. Return to your electronics supplier for proper handling.*

Product Registration

Please take the time to register your product. To register your product, follow the instructions at this link. http://www.edgeproducts.com/product_registration.php

Why register? Benefits of product registration:

- **Your Safety** – registering your product allows us to know exactly which product you have and provide important product updates to you that improve the quality and/or safety of the product
- **Enhanced Features** – almost all Edge products are easily updated via the internet. We are constantly adding new features and improvements to our product that we know you will want to enjoy
- **Confirmation of Ownership** – provides a record in case of product loss, theft, or required warranty work. When you call us for support our team will already have much of the information they need to help you!
- **Improved Product Development** – helps us better understand you (our customers) and design products that meet your needs
- **Special Offers** – allows us to inform you about special offers on accessories and/or new products that fit your vehicle and enhance your driving experience
- **AND…**
- **Extended Warranty Plan Opportunity** – within the first 90 days of ownership, Edge offers the option to buy a 1-year warranty extension to all customers who register their product!

Before installing this EDGE product, the Evolution unit must be updated. Follow the instructions located in the Fusion Section at the back of this Manual.

All Edge modules and programmers are built to operate with OEM calibrations. When you take your vehicle to a service center they may, by your request or otherwise, update your vehicles calibrations. Therefore it is important that you return your vehicle to stock before taking it in for service. Edge updates its active products (i.e. those currently being manufactured) to work effectively with updated OEM calibrations. However, this process can take some time as Edge is not always made aware of calibration changes made by the OEM. In the case of discontinued products, Edge cannot ensure that your unit will work effectively if you take your vehicle to a dealership and you are given, by your request or otherwise, a new calibration.

Programming your vehicle may expose existing defects in your vehicle's PCM that could disable your vehicle. It is advised that you do not program your vehicle in remote locations in case of vehicle failure.

Warning: The Evolution employs carefully modified strategies that are designed to be utilized on unmodified (stock) vehicles only.

Many aftermarket components such as cold air intake (CAI) kits, exhaust systems, and throttle body spacers as well as forced induction systems (turbochargers, superchargers, nitrous oxide, etc) alter the calculated airflow characteristics of the engine. In addition, mechanical modifications to the engine such as displacement changes, camshaft modification, and cylinder head modification may alter calculated airflow characteristics.

Using any of these modifications (either alone or in any combination) in conjunction with the Evolution is NOT RECOMMENDED as it may cause an excessively lean condition which could result in engine damage.

Edge Products will not be responsible for any damages caused by using the Evolution on a vehicle that has been modified from a stock configuration.

If you have used another tuner/programmer on your vehicle, you will need to program back to stock and remove the device before using the Edge Products Device.

Failure to return to stock may result in PCM failure or engine damage.

CARB/EPA Compliance

This product meets the emissions compliance requirements of the California Air Resources Board and Federal Environmental Protection Agency and is legal for sale and use on pollution-controlled vehicles operated on public streets and highways. It must be installed and operated according to the instructions provided in this user's manual. Included with this product is a sticker like the one pictured below for you to retain with your vehicle.

You can either apply it somewhere on the vehicle (e.g., the inside end of driver's door) or simply retain it in your glove box. The purpose of the sticker is to inform anyone who may have questions regarding the use of your Edge product and how it affects emissions. For example, it would be something to show an emissions technician if questioned when taking your vehicle in for an emissions check to let him/her know the product is CARB emissions compliant.

About the Evolution

Congratulations on purchasing the *Evolution* by Edge Products, the leader in truck performance and power gain technology. The following manual contains information and instructions on the proper use of the *Evolution*. Please read carefully before proceeding to program your vehicle.

Note: *Read the product disclaimer and the Getting Connected section before programming your vehicle.*

Note: *At the back of this manual, we have included commonly used acronyms. This should help while using the Evolution.*

Stock Program

The *Evolution* automatically makes a backup of your stock program from your PCM before writing a new program onto your PCM. This assures that you will have the stock program if/when you desire to reprogram your vehicle to its original stock program.

It is ***strongly*** recommended prior to returning your vehicle to a service center or emissions check that you return your vehicle's computer to the stock program. In the event that the service center re-flashes your vehicle's computer (a common practice) and you have NOT returned it to stock, your *Evolution* programmer will be rendered useless. If this happens, call our technical support at (888) 360-EDGE and they can help you recover your *Evolution* for a small fee. Follow the steps included in this manual for returning your program to stock.

Transmission Only Program

This setting is the lowest level setting. It will provide firmer transmission shifts which helps to increase the transmission life. It does not provide any engine performance increases and is designed to run with regular unleaded fuel.

Note: *Transmission Only Program will not work on 6.0-6.2L or HD models with the 6-Speed transmissions.*

Economy Program (87+ octane fuel)

This setting is provided to not only enhance transmission shifting, but also net you the best overall fuel economy gain for every day driving. **Note***: Towing heavy loads with this level may result in detonation (pinging or knocking) with low octane fuels. If you experience detonation while towing in this level, you may need to run higher octane fuel,* or an octane additive.

Tow Performance Program (91+ octane fuel)

This setting not only provides improved transmission shifting, but will also modify the ignition timing and fuel injection strategies to improve the performance of your vehicle. This level is designed to run with 91+ octane fuel only. You should see an improvement in fuel economy as well as added horsepower and torque. This level is recommended for most towing situations. **Warning:** *Do not exceed your vehicle's max GVWR as outlined in the vehicle's owners manual.*

Extreme Program (91+ octane fuel)

This is the highest performance setting for the *Evolution*. The fuel injection and ignition timing strategies are aggressively tuned to extract the maximum performance from your vehicle without sacrificing drivability or durability. The transmission strategy is modified to take advantage of the increased engine performance by providing quicker, firmer shifts. Due to the high performance nature of this setting, towing or hauling heavy loads is not recommended and you will be required to run 91 octane (or better) fuel.

PIDs (Parameter ID)

The *Evolution* allows the user to view up to 4 PIDs at one time. PIDs identify an address in memory which contains vehicle operating information a driver may wish to monitor. (See the *Set Up* section for a complete list)

Scrolling PIDs

The *Evolution* allows the user to view up to 4 PIDs at one time. Once in the PID display screen you can press the ENTER button to enter scrolling PIDs mode. When you are in this mode an asterisk will be displayed in the upper right corner. You can then scroll through the PIDs by using the UP and DOWN arrow keys. You can always scroll back to your customized screen or once you have scrolled through all of the PIDs you will return to your customized screen. Press the ENTER again to exit the Scrolling PID mode.

Features

Diagnostics

The *Evolution* is also a powerful diagnostics tool. You can view any diagnostic trouble codes (DTCs) your vehicle may have, which in turn allows you to fix them. It will also allow you to turn off that annoying "Check Engine" light when the problem has been addressed (no more expensive trips to the dealer for a diagnostics scan).

0-60 and Quarter Mile time

Another feature often only found on the Edge Product monitors, is the ability to determine your quarter mile times as well as your 0-60 times.

Alerts

If you would like to know when a certain parameter, such as transmission temperature, reaches a certain value you can set an alert to that value. When the preset value is reached, the *Evolution*'s screen will flash red and display the triggered alert and the current value for that particular alert parameter. Please note that Alerts may flash only if that parameter is being actively displayed on the *Evolution* monitor.

Records

While the *Evolution* is displaying parameters of your truck it will record the highest value the parameters have reached. These records can be viewed and reset at any time. Please note that some parameters may record only if that parameter is actively displayed on the *Evolution* monitor.

Custom Options

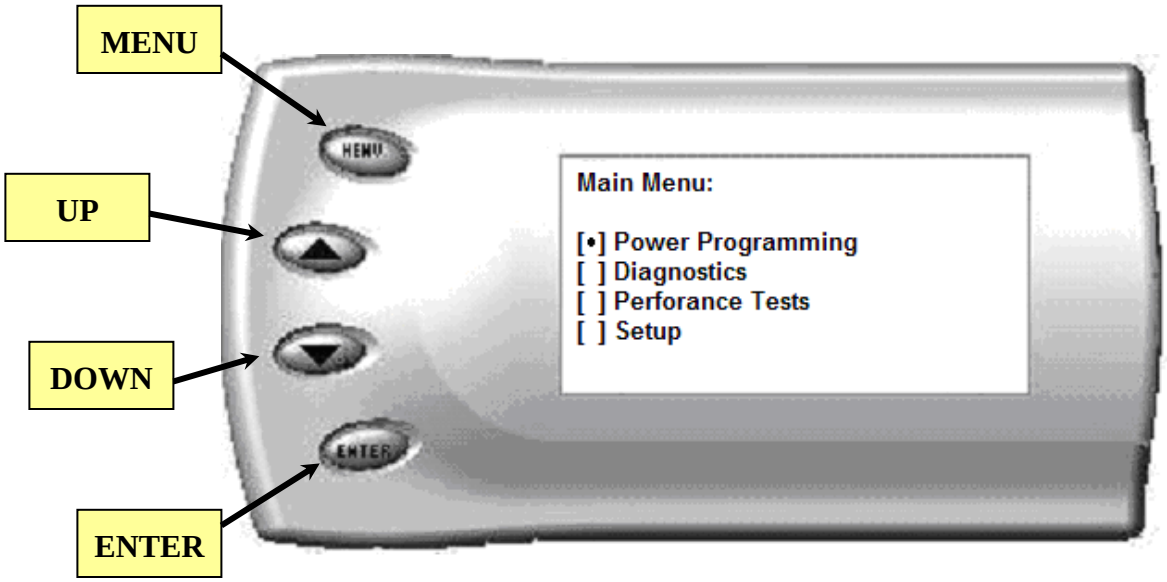
While programming your vehicle, you have the option to customize our tuning. For example, you can change your tire size value which can correct your odometer readings that result from changing tire sizes.

Refer to the *Custom Options* section for a complete list and description of options that are available. These can be changed while programming your vehicle.

Note: *Custom Options will not work on 6.0-6.2L or HD models with the 6-Speed transmissions.*

Display and Keypad

The following picture is a sample *Evolution* screen. Great effort has gone into making the *Evolution* programmer very simple to use. The [UP] and [DOWN] arrow keys are used to scroll through options on the screen. The [ENTER] key is used to select desired options from a menu or move to the next screen. The [MENU] key is used to enter the Main Menu from the parameter display or return to the previous screen. This version of the *Evolution* also has the option to change the backlighting color of the display to a wide range of colors.



Getting Connected

The *Evolution* programmer connects to the diagnostic port of your vehicle. Follow the following steps to install the *Evolution*:

1. Begin by turning your ignition key to the OFF position. Locate the black diagnostic (OBDII) connector (Figure #1) under the dash near the steering column. As you sit in your vehicle, it could be located right above your right knee. Sometimes the cover to this connector will be labeled “Data Link.”

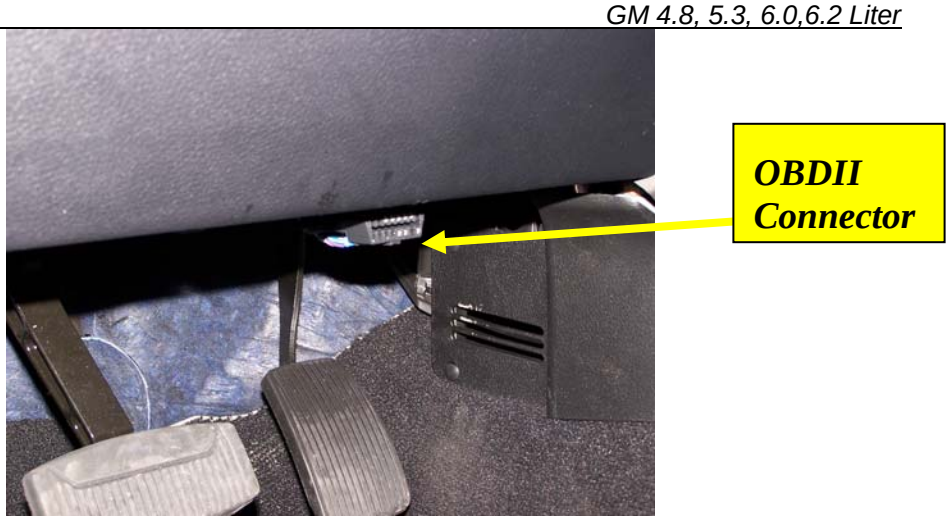


Figure #1

2. With the driver's side door open, remove the access panel on the left side of the dashboard (Figure #2) and feed the end of the ODBII cable up from the under the dashboard, outwards (shown in Figure #3) through the access panel. Snake it up to the A-pillar of the vehicle and replace the access panel. The cable should be protruding from the dashboard up along the A-pillar and be able to move freely when pulled.

Figure #2

Figure #3

2. Route the cable up along the door seal, and along the bottom of the A-Pillar (shown in Figure #4).

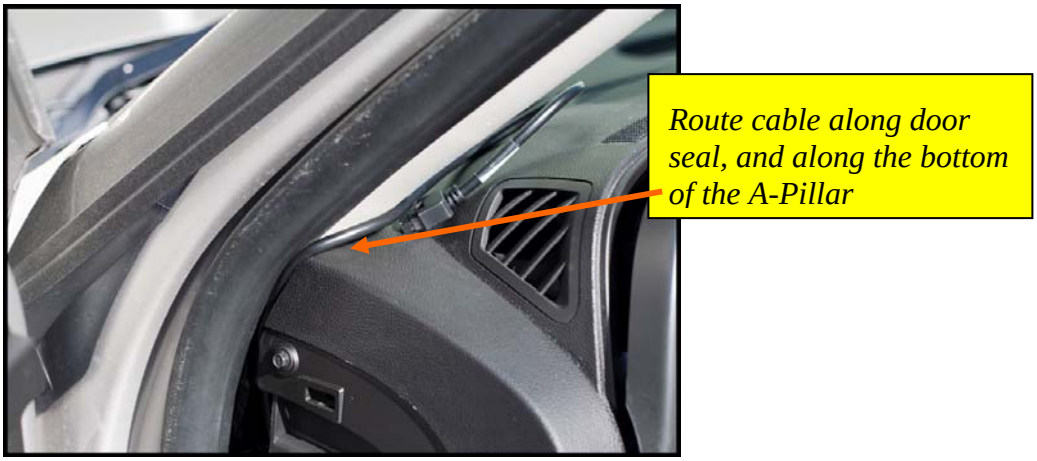


Figure #4

3. Locate the vent section of the dash panel on the left side of the steering wheel, put your fingers behind the section and firmly pull towards you, the vent panel will release as shown in Figure #5

Figure #5

4. Feed roughly 2 to 4 inches of cable through the Pod. Set the Pod onto the dashboard (shown in Figure #6) with the end of the cable protruding through the front of the Pod. Once the Pod is set in place, firmly apply pressure to the front of the vent section of the dash, being sure to keep the tab on the pod located under the vent section of the dash. Press towards the dash until the vent section locks securely back into place (shown in Figure #6 and #7)

Figure #6

Figure #7

NOTE: *If the vent section is not snapping back into place with just firm pressure, make sure that the locking tabs are properly aligned before using excess force. Also note that the pod tabs insert under the top edge of the vent molding as shown.*

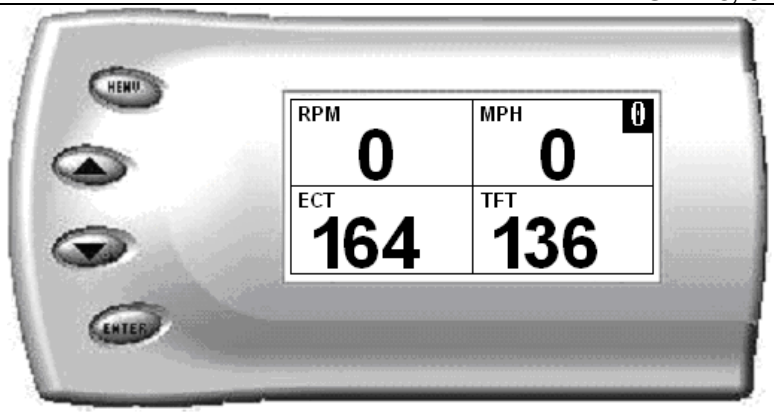
5. With the Pod secure, attach the *Evolution* to the cable (shown in Figure #8).

Figure #8

6. Insert the *Evolution* into the Pod. Any excess cable may be stuffed behind the *Evolution* or may be pulled back through the dash to eliminate slack. The result of the installation is shown in Figure #9. Be sure to use the supplied cable ties to secure any excess cable underneath the dash to prevent the cable interfering with proper pedal operation.

Figure #9

7. With the Pod and Evolution securely in place, turn the ignition key ON. Then plug the cable OBDII connector into the truck OBDII connector shown in Figure #1. The Evolution logo and a brief wait note will display. Press [ENTER]. After pressing [ENTER], the main display will come up.



Note: *Parameters and values might vary.*

8. There are five boxes that will be displaying information about your vehicle. The black box in the top right corner displays which level is currently programmed onto your vehicle.
   - **0** – Vehicle is currently at stock.
   - **1** – Vehicle has been programmed to *Transmission Only* (Level 1).
   - **2** – Vehicle has been programmed to *Economy* (Level 2)
   - **3** – Vehicle has been programmed to *Towing* (Level 3).
   - **4** – Vehicle has been programmed to *Performance* (Level 4).

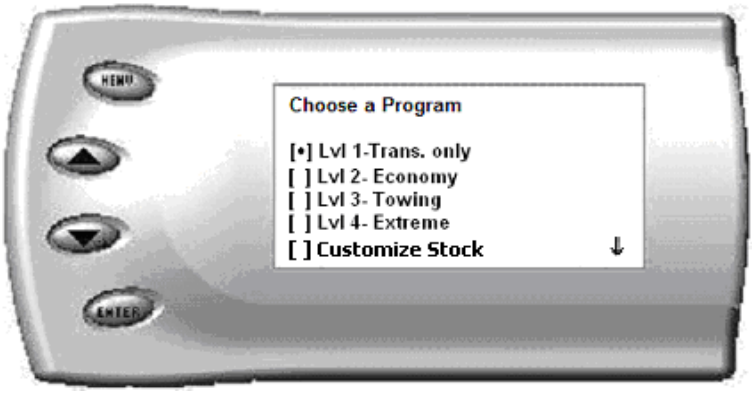
   The other four boxes can show up to 4 PIDs (Parameter IDs) of your vehicle. By default, they are your vehicle's IMPG (Instant Mile Per Gallon), Load %, TFT (Transmission Fluid Temp), and ECT (Engine Coolant Temp). Optional parameters and display formats may be selected in the *Changing Display* section of this manual.

9. From this display, press [MENU] to select and use other features of the *Evolution*. The display backlight dimming can also be controlled from this display by using the [UP] and [DOWN] arrow keys.

Power Programming

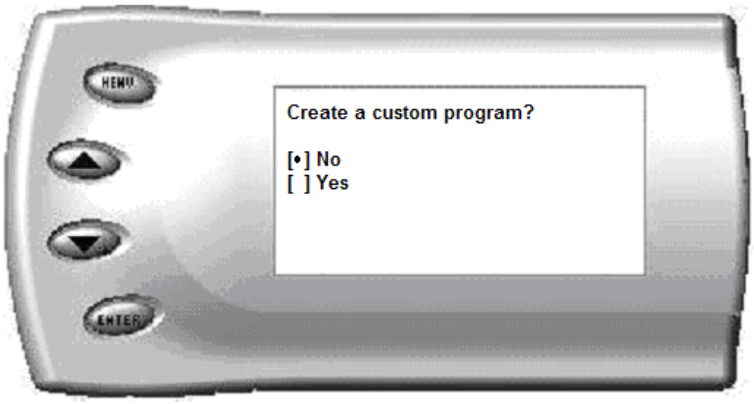
"Caution: Vehicle manufacturers do not recommend vehicle programming in extreme temperature. Please see the service manual of your vehicle to ensure that programming is being done in accordance to the original equipment manufacturers specifications."

From the main screen, press [MENU] to enter the main menu. Then select *Power Programming*. The following screen appears:



1. Select the level that best meets your needs. For more information about each level, read the *About the Evolution* section in this manual). Confirm your selection by pressing [ENTER] on the screens that follow.

2. During the first use, the *Evolution* will read the original calibration from your PCM and then build all the necessary programs. This will take several minutes. (**NOTE:** *The programming step will set off audible chime tones. These sounds and dash display changes are normal,*) This step is skipped during all further programming operations. Upon the completion of saving stock, the following screen will appear:

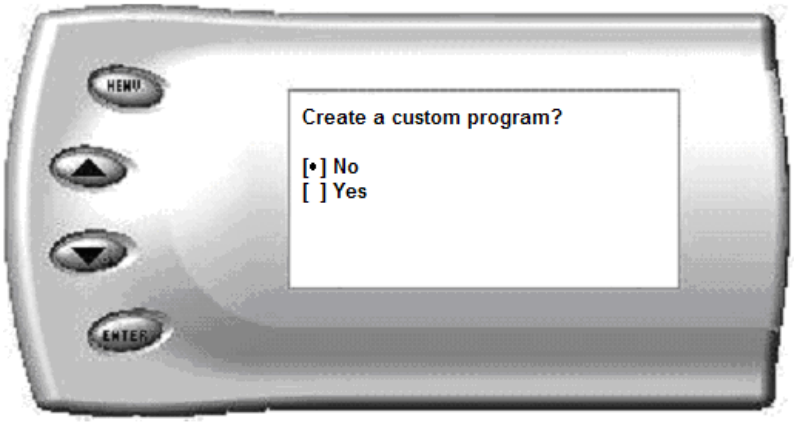


3. You have the option to change certain parameters of the level you chose. If you would like to learn more about what parameters are available and how to use them, then read the *Custom Options* sections in this manual. To use the standard program without customizing options, simply press No and press [ENTER].
4. The *Evolution* will then erase your specific calibration sections of the PCMs memory, and then write the selected calibration (level) onto the PCM. This will also take several minutes. If at any time you receive an error message, refer to the *Troubleshooting* section at the back of this manual for further instructions.

5. When the *Evolution* is done programming, continue to follow the directions on the screen. The following screen will appear and you can press [ENTER] or [MENU] to return to the Main Menu:

Custom Options

When preparing to program your vehicle, you will have the option to change certain parameters. Choosing YES when prompted to "Create a custom program?" will load the *Custom Options* menu.



Custom Options are provided to allow for flexibility based on driver preferences. Any option customization done by the user is not warranted by Edge Products. Please use at your own risk.

The following customizable options are available:

Gear Ratio

The *Evolution* has the ability to correct for modified gear ratios. Do not change the value displayed on the *Evolution* unless you have altered stock gear ratios. For 4WD vehicles, both the front and rear differential gears should be the same.

Some reasons for changing gears ratios include:

1. To maintain the optimum ratio between the engine RPM and tire RPM. Changing tire sizes affects this ratio. Changing the differential gear helps to restore the proper ratio.

2. When drag racing, changing to a higher gear will provide more torque off the starting line. There are formulas that show the best gears to use based on HP, vehicle weight, as well as other factors. Be aware that when running higher gears your engine will run at higher RPMs and your fuel economy may suffer.

The default value the *Evolution* displays is the current value stored in the PCM.

Adjust the value displayed by pressing the [UP] and [DOWN] arrow keys. You can change the gear ratio from 2.73 to 5.13 in increments of 0.01. Changing this value will allow your PCM to accurately calculate vehicle speed and odometer readings. These changes will also affect your shift points.

Tire Size

The *Evolution* has the ability to correct for changes in tire size. If you have changed your tires to different sizes than stock the PCM may miscalculate vehicle speed which can affect shifting as well as the speedometer. Correcting the tire size will allow the PCM to accurately calculate vehicle speed and odometer readings. You will not need to change the value displayed if you are running factory size tires. If you choose to change your tire size, four formats are available for you to use. You only need to choose one format.

P-METRIC – This is one of the most common formats used. The tire size will be printed on the tire.

Example: 275 / 75 R16

ENGLISH – This looks much like the P_METRIC format. The first number will represent the height of the tire in inches

Example: 35 x 20 R17

HEIGHT – Some tires only have the height of the tire in inches.

Example: 35.5”

CIRCUMFERENCE – The most accurate way of entering in your tire size will be to measure the circumference of your tire. You may also measure your tire’s circumference by marking your tire and rolling it one complete revolution and measuring the distance in millimeters.

Note: Setting the tire size larger than 2900 mm may result in an ABS Warning light and the disabling of your ABS System, depending on your ABS.

The numbers on this screen represent the circumference (in mm) of your tire size. The default value the *Evolution* displays is the current value stored in the PCM. Adjust the tire size by pressing the [UP] and [DOWN] arrow keys.

The following table will help you determine your tire circumference by matching your tire size with the common sizes listed. For example, if your tire size is 285/ 65-18, the value (circumference) you enter into the *Evolution* is 2600. You may also use the formula provided to determine your approximate tire circumference. Finally, you may also measure your tire’s circumference by marking your tire and rolling it one complete revolution and measuring the distance in inches or millimeters. If you measure in inches, multiply the distance by 25.4 to convert to mm. (ex. 91.3 inches x 25.4 = 2319 mm). The range of change is from 2000mm to 3500mm in increments of 1mm.

Width	Ratio	Rim	Circumference
265	70	16	2441mm
275	70	16	2485mm
305	70	16	2617mm
215	75	16	2289mm
245	75	16	2430mm
265	75	16	2524mm
285	75	16	2618mm
295	75	16	2666mm
305	75	16	2713mm
315	75	16	2760mm
325	75	16	2807mm
265	70	17	2521mm
285	75	17	2698mm
315	75	17	2840mm
275	65	18	2559mm
285	65	18	2600mm
285	60	18	2510mm
325	60	18	2660mm

Tire Size	
33	2632mm
35	2792mm
37	2951mm
38	3031mm

Circumference Equation:

[(width * ratio * 0.02) + (rim * 25.4)] * 3.1415

Steps:

1. Multiply ***Width***, ***Ratio*** and ***0.02***
2. Multiply ***Rim*** and ***25.4***
3. Add Step #1 with Step #2
4. Multiply Step #3 with ***3.1416***
5. The result will be the circumference of your tire in mm.

When adjusting the following values, it is highly advised to make gradual changes as opposed to aggressive changes. This will help avoid possible engine or transmission damage.

Speed Limiter

CAUTION!

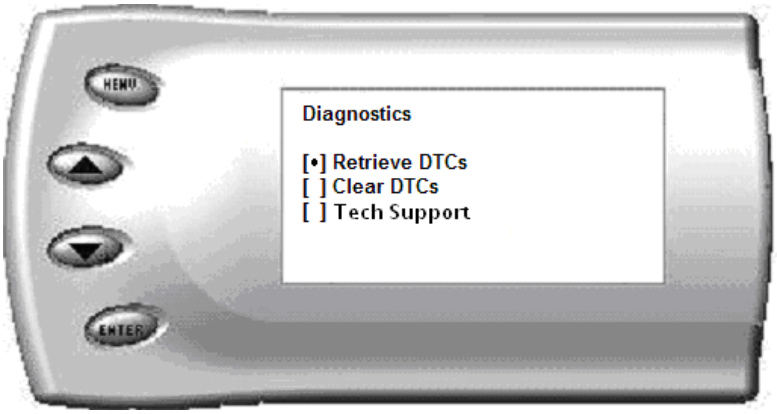
Your *Evolution* programmer has the ability to remove/adjust your vehicle's factory speed limiter. Removal/adjustment of the factory speed limiter is intended for use at a closed circuit, legally sanctioned racing environment. Even if racing in a legally sanctioned racing environment, it is your responsibility to ensure your tires and other vehicle components are rated to travel at increased speeds with the speed limiter removed/adjusted. If you remove/adjust the speed limiter during highway driving, it is your responsibility to obey all driving laws, including adhering to posted speed limits. Removing/adjusting the speed limiter for purposes inconsistent with the product's intended function, as stated herein, is a violation of the product's intended use and invalidates the product's warranty. Edge Products is not responsible for, or liable for the consequences of improper product use.

(**Hint:** *This value may be lowered in fleet situations or situations where young drivers are present.*)

Diagnostics

The diagnostics scanner included with your *Evolution* is a powerful tool that allows you to view and clear diagnostic trouble codes (DTCs). DTCs are the messages your vehicle's computer stores when it detects a problem with your vehicle. The "Check Engine" light on your dash is activated by the presence of most DTCs.

If you selected *Diagnostics* from the main menu of the *Evolution*, the screen displays the following message:



Retrieving Codes

If you want to retrieve and view the DTCs on your vehicle, select the *Retrieve* option. Make sure your ignition is in the ON position.

After selecting the *Retrieve* option, any stored DTCs will appear on the screen like the following example:

Press [MENU] to exit the DTC list and return to the previous menu.

If your vehicle does not have trouble codes, the following screen will appear:

Clearing Codes

If you want to clear the DTCs on your vehicle, select the *Clear DTCs* option.

After selecting the *Clear DTCs* option, any current stored DTCs will be cleared from your vehicle and the "Check Engine" light will go out. However, if you do not address the issue that originally caused the DTC, the DTC will set again and the "Check Engine" light will come back on. Once the DTCs have been cleared, press [ENTER] to return to the previous menu.

Tech Support

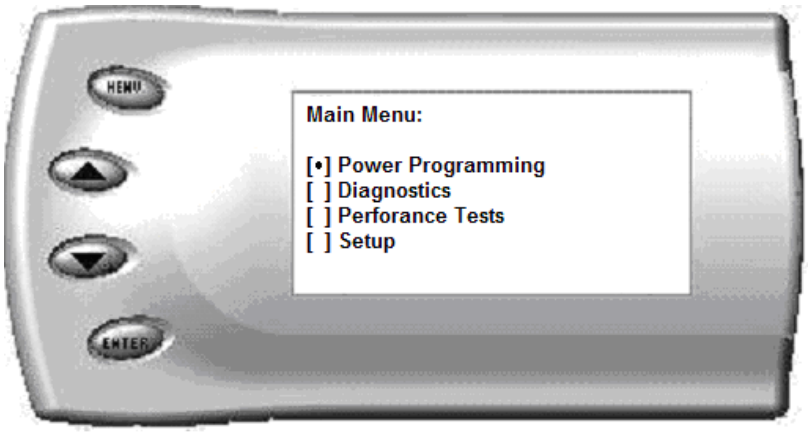
Information found in this section is normally only accessed when instructed by an Edge support person. For example, Version Info displays the current Bootloader, Firmware, and Calibration versions installed on your *Evolution.* Your vehicle's HEX code is also shown. Using the Fusion® software, you will be able to access online updates to ensure your *Evolution* is always up to date.

Note: *Make sure you return your vehicle to stock before attempting an update, or the PC software will not allow you to continue.*

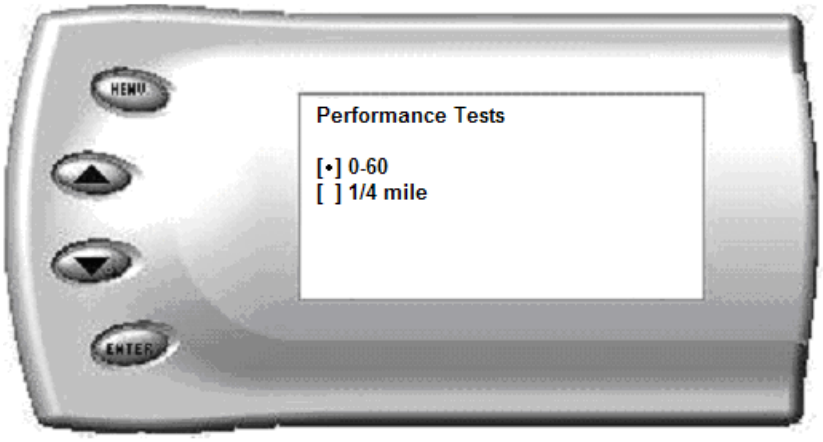
Performance Testing

The *Evolution* allows you to test the performance of your vehicle by timing the 0-60 and the quarter mile times. It is helpful to remember these might not be results you would receive from actual races. Incorrect speedometer reading and tire slippage along with other factors can cause slight miscalculations in the displayed results. To run these tests, perform the following steps:

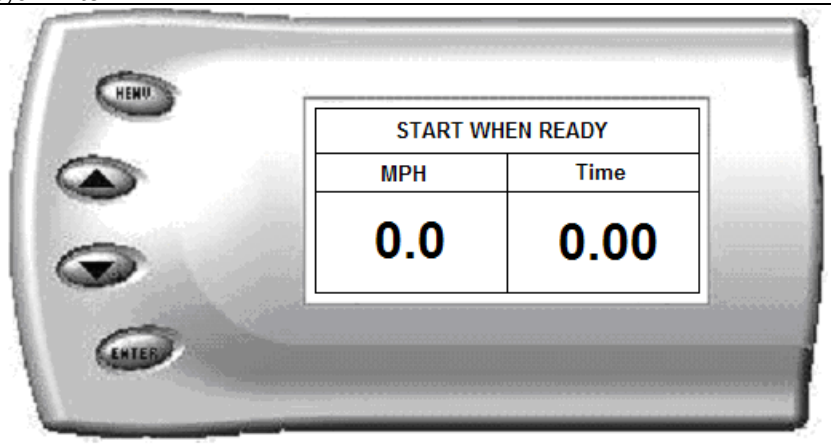
1. Press [MENU] and the *Main Menu* screen should appear:



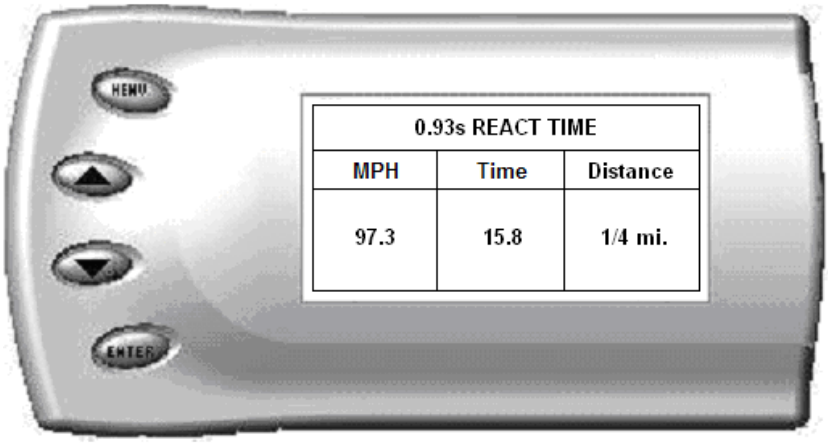
2. Select the *Performance Tests* option. The following screen appears:



3. Select the desired performance test (0-60 screen is shown below). If your vehicle is moving at this time, the *Evolution* will ask you to come to a stop.



4. For the 0-60 MPH run, press the accelerator pedal and the test automatically begins. For the ¼ mile test, you will be asked to press a key when ready. It will then cycle through a starting light sequence (Christmas tree) and tells you when to go. As you drive, the screen should be displaying your current speed. When the test is complete (the desired distance or speed is reached), the test will automatically stop and your time will be displayed on the screen as follows (quarter mile result example):



This will show how long it took you to cover 60 feet, 1/8 mile, and ¼ mile. In addition, your MPH at ¼ mile will also be shown (see the example above). The best run is stored for later viewing. You may also use the back of this manual to write down your times.

At the end of a ¼ mile run, you will see a reaction time at the top of the screen. This time begins when the final yellow light is displayed. The time between the final yellow and the green is a ½ second, so a perfect reaction time is a ½ second. The average person will see a response time of around 1 second. You'll get an "Illegal Start" message if you start before the green and you're screen will turn red. You can still finish the run, but the screen will let you know that you started before the green light.

Note: *The best speed and time is recorded for viewing in the Records section.*

5. After the test is complete, press [MENU] to return to the Performance Menu.

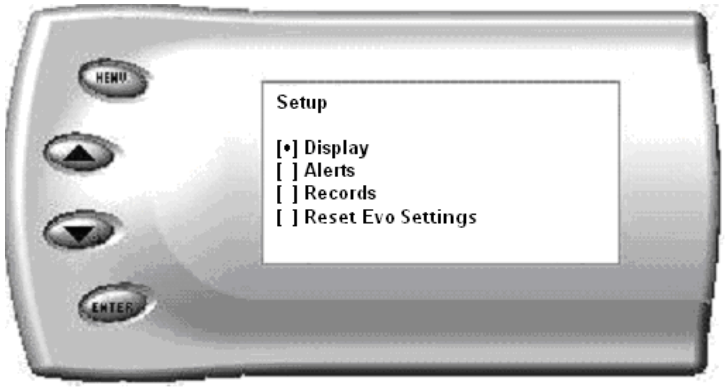
Setup

The *Evolution* gives you even more additional features. You can choose from several different parameters to monitor, how these parameters are displayed, set parameter alerts, and view the highest value that certain parameters have reached.

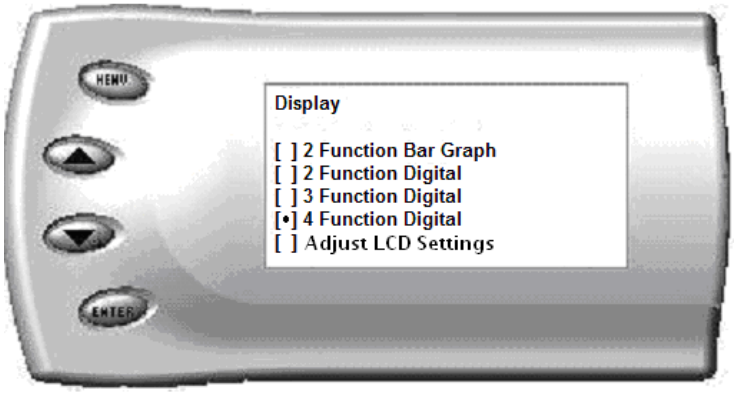
Changing the Display View

The *Evolution* allows you to view multiple engine parameters on the same screen. To select a desired view, perform the following steps:

1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:

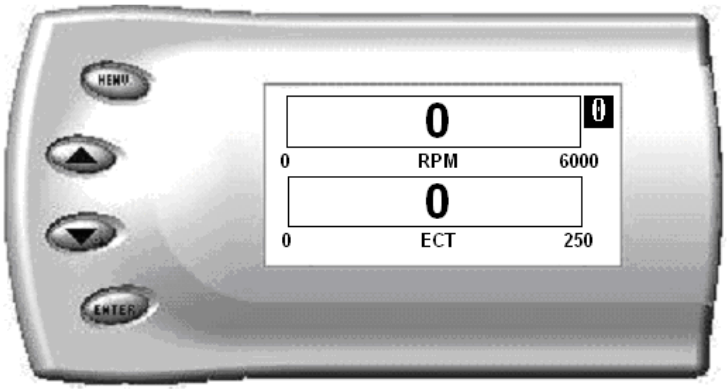


2. Select the *Display* option. The following screen appears:

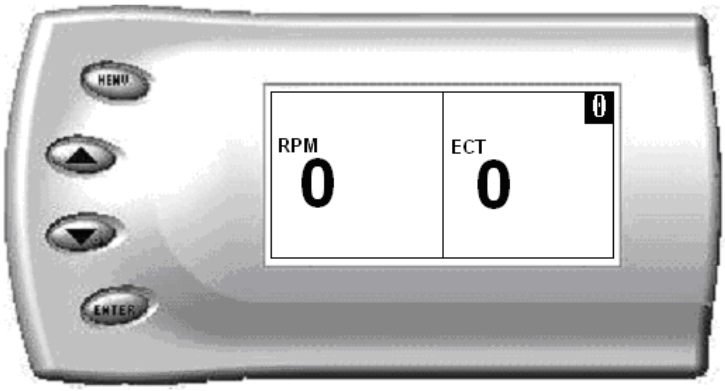


3. Select the desired viewing option by using the [UP] and [DOWN] arrows and pressing the [ENTER] key on the desired display type. Below are examples of the display options:

Two Function Bar Graph Display Sample



Two Function Digital Display Sample



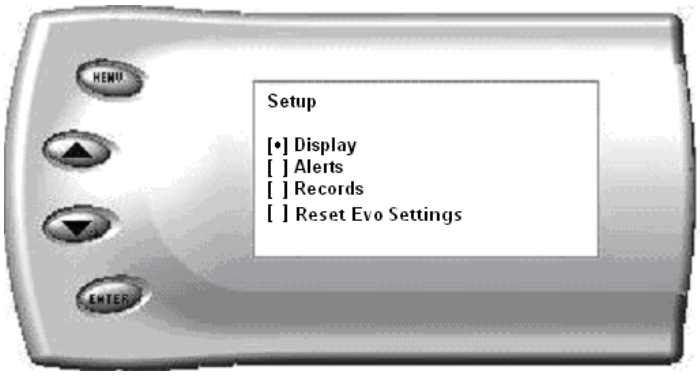
Three Function Digital Display Sample

Four Function Digital Display Sample

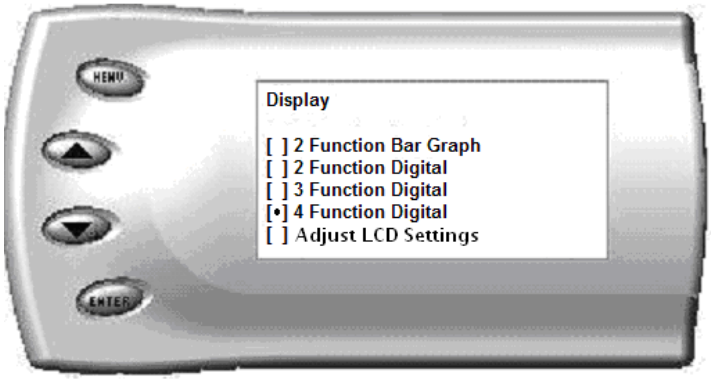
Changing the Variables on the Screen

To change the variables on the screen, perform the following steps:

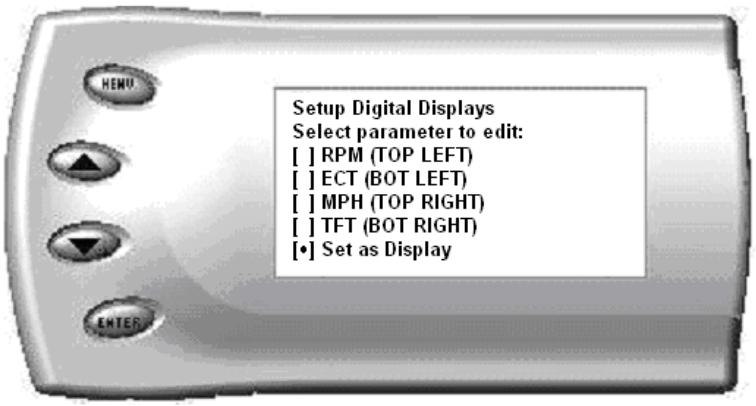
1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:



2. Select the *Display* option. The following screen appears:



3. Select the style which you would like the parameters to be displayed on your screen and press [ENTER]. Depending on which display you select, a screen similar to the following appears:



4. This screen lists the current parameters being displayed and their respective positions on the screen (i.e., TOP LEFT, etc.). Select the position you would like to change and press [ENTER]. A list of available parameters will be displayed. Select the parameter you would like to view and press [ENTER]. (A list of commonly used acronyms is located in the back of this manual and an in depth list of the PIDs supported follows). Once you have selected your desired parameters, select the *Set as Display* option and press [ENTER]. You will return to the *Setup* menu with your new settings saved.

Below is a list of the 26 PIDs you can display and description of each:

- AAT (ambient air temp) – Degrees F. *This indicates the outside air temperature.*
- AFC (air flow calculated) – g/s. *This is the calculated amount of air that is flowing into your engine in grams per second.*
- AFP (alcohol fuel percentage) – % . *This indicates the amount of alcohol (E85) detected in the fuel tank. Your vehicle will use this to determine whether to use E85 fueling strategies, or Gasoline fueling strategies*
- BARO (barometric pressure) – kPa. *This indicates the barometric pressure in Kilopascals. 1 kPa is = 1 atmosphere, or .1449 psi.*
- BAT (battery voltage) – voltage. *This indicates the amount of voltage that the battery is currently outputting in engine off conditions, and the amount of voltage produced by the alternator during engine run conditions.*
- DCA (distance cylinder activated) – miles. *This indicates how long it's been since your motor was run with deactivated cylinders. Each time the Cylinders are reactivated, this value will zero out.*
- DCD (distance cylinder deactivated) – miles. *This indicates how long your engine has been running with cylinder(s) deactivated. Each time the Cylinders are deactivated, this value will zero out.*

- DCYL (deactivated cylinders) – #. *If your vehicle is equipped with Cylinder Deactivation, this will show you which cylinders are currently deactivated*
- DIDL (desired idle speed) – RPM *This indicates the Idle RPM that you truck is currently trying to reach.*
- ECT (engine coolant temperature) – Degrees F. *This tells you the current temperature of your antifreeze/engine coolant. This will typically show about 20 degrees F lower than the instrument cluster.*
- EOT (engine oil temperature) – Degrees F. *This tells you the current temperature of your engine oil.*
- EOP (engine oil pressure) – psi. *This tells you the current engine oil pressure.*
- FTL (fuel tank level) - %. *This tells you the current fuel level in your tank in percentage. 0% is empty, 100% is full.*
- GEAR (current gear) - #. *This displays which gear your transmission is currently in.*
- IAT (intake air temperature) – Degrees F. *This displays the temperature of the air coming into the intake of your vehicle.*
- IMPG (Instant Mile Per Gallon) This feature will display mile per gallon of the current driving cycle.
- LOAD (engine load %) – Percentage of total power available being used by the engine. *This tells you how hard the engine is working. If this reads 0% load it means the engine is not working at all, if it reads 100% load it indicates that the engine is working at it's maximum capability.*
- LOOP (displays loop status) - open/closed. *This tells you whether or not your vehicle is operating in Open or Closed loop. Your vehicle uses sensors to determine how much fuel to add. It uses an Oxygen sensor to determine the air to fuel ratio in the exhaust. When the vehicle is in closed loop, it is constantly adjusting the fueling to try and reach a 14.7:1 Air to fuel Ratio. By doing this it can achieve the best fuel economy while still maintaining safe running conditions. When you are in high load conditions such as full throttle acceleration, it will move to Open loop. In open loop fueling the vehicle uses a set of predetermined fueling strategies in order to keep the vehicle in a safe running condition.*
- MAF (mass air flow) – Used to determine air/fuel ratio. *The Mass Air Flow sensor is used to determine the speed, temperature, and the density of the air coming into the intake of the vehicle. It uses these measurements to determine how much fuel to add or subtract, and also to determine how hard the engine is working.*
- MAP (manifold absolute pressure) – psi. *This displays the pressure inside the intake manifold on your engine.*
- MPH (miles per hour) – ***Note: Dash display may be +/-3 MPH off from the digital display due to mechanical differences in the spring, etc. used to control the gauge.*** *This indicates what speed in miles per hour you are currently traveling.*

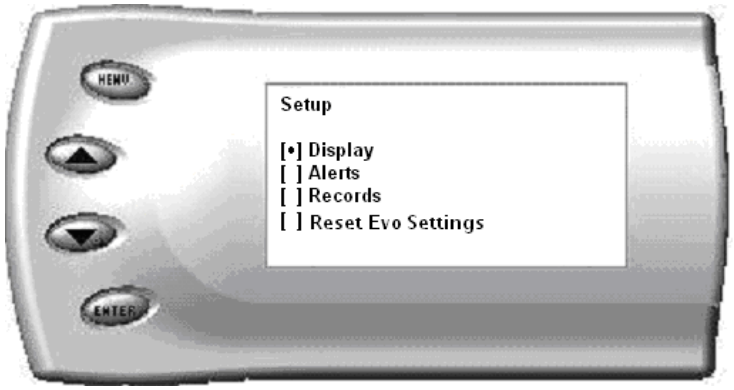
- PE (power enrichment) – on/off. *This indicates the ECM is using the Power Enrichment calibration maps. This occurs when in WOT (Wide Open Throttle). PE maps deal with fueling strategies.*
- RPM (revolutions per minute) – Engine speed. *This defines where the engine is currently revving in RPM.*
- SPARK (spark advance) – Current timing advance/retard for the spark plugs. *This will tell you when the spark plugs are being fired. Your engine rotates in a circular motion. One rotation = 360 degrees. The spark plugs have to be fired before the piston reaches the top of the cylinder. The engine uses a measurement of degrees before Top Dead Center (the point when the piston is at the top of the cylinder) to determine when to fire the spark plug. This indicates when the spark plugs are being fired in degrees before top dead center.*
- TFT (transmission fluid temperature) – Degrees F. *This displays the temperature of the fluid in your transmission.*
- TP (throttle position indicated angle) - %. *This indicates what percentage of throttle you are currently applying, 0% is no throttle at all, and 100% is all the way to the floor.*

Changing the Backlighting

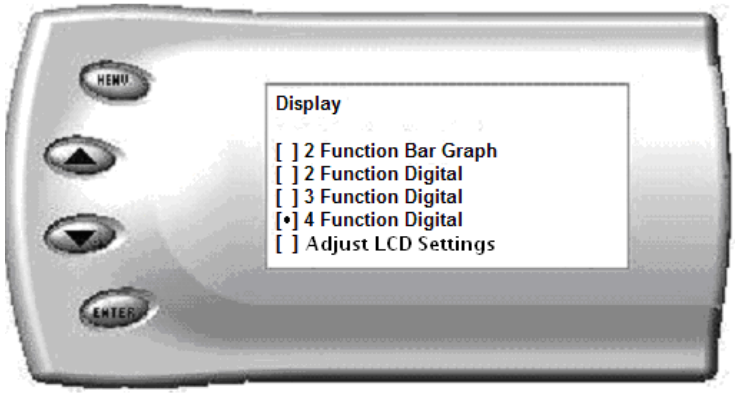
Adjusting the Backlight Color

To change the backlighting color, perform the following steps:

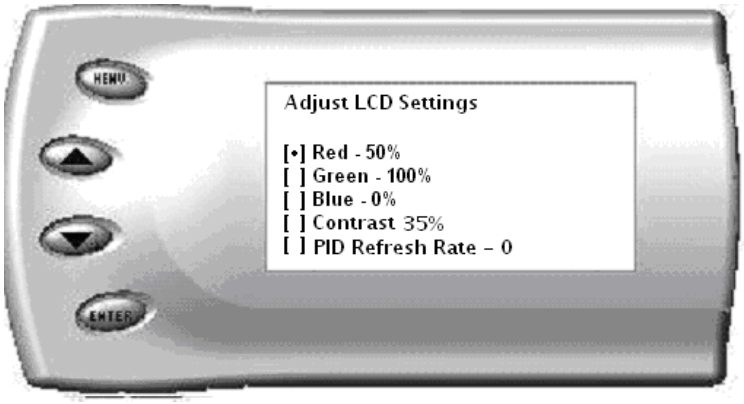
1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:



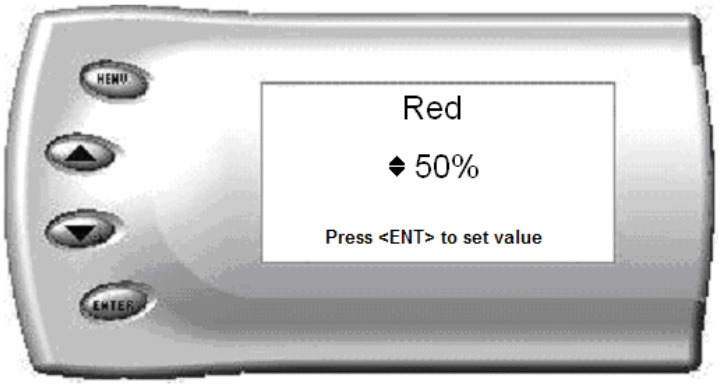
2. Select the *Display* option. The following screen appears:



3. Select the *Adjust LCD Settings* option. The following screen appears:



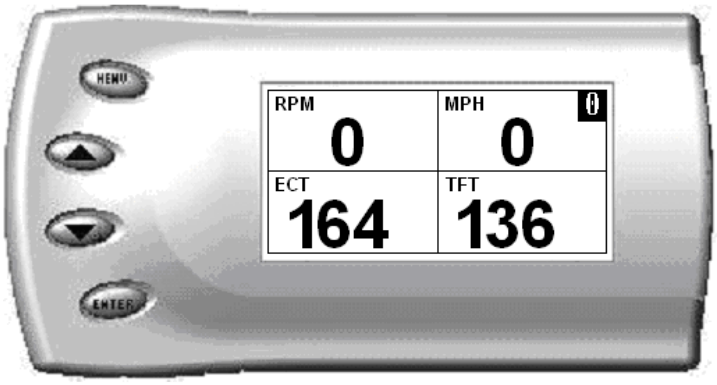
4. Select the color you would like to change.
5. Depending on the color you select, a screen similar to the following appears (example of Red):



6. As you adjust the percentage shown on the screen, you should notice a change in the color of the screen. Once the desired color value has been reached, press [ENTER]. If you would like to return to the previous screen and abort the current color change, press [MENU].
7. *PID Refresh Rate*- Adjusting this option will change how fast the screen updates the displayed information.

Adjusting the Backlight Brightness

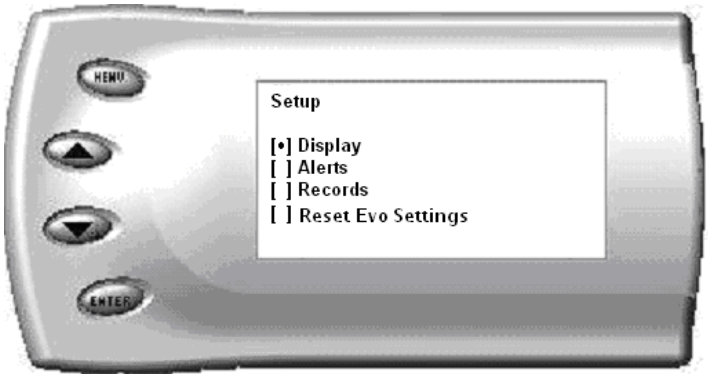
When viewing engine parameters (like the sample below) press the [UP] and [DOWN] arrow keys to adjust the brightness of the display. Each time the button is pressed the backlight will either brighten or dim by 10% of the total brightness. The default setting is 100% brightness.



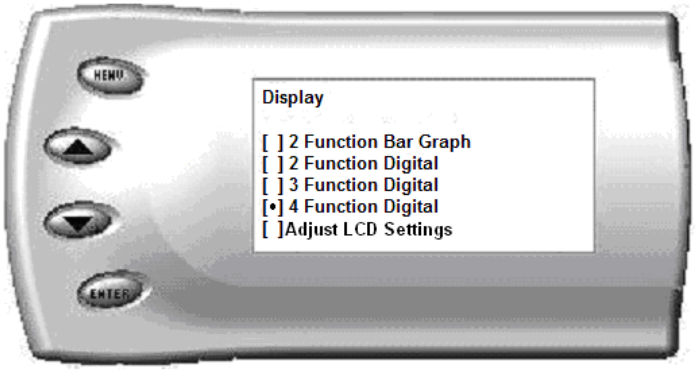
Adjusting the Contrast

To change the contrast, perform the following steps:

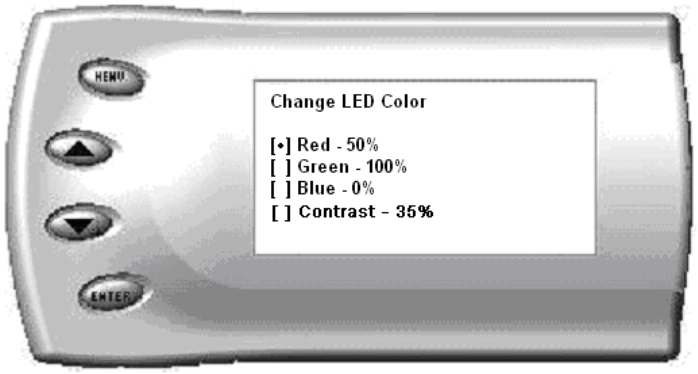
1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:



2. Select the *Display* option. The following screen appears:



3. Select the *Adjust LCD Settings* option. The following screen appears:



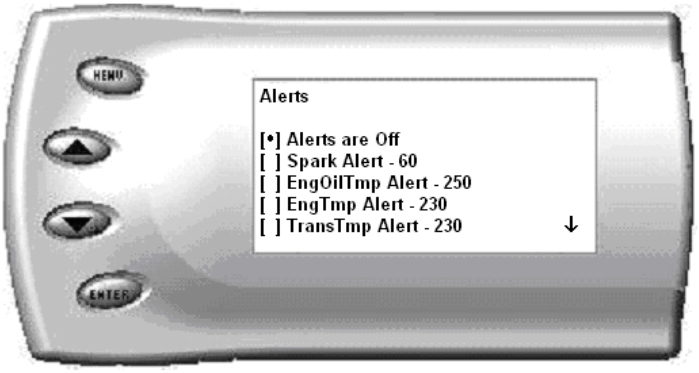
4. Select *Contrast*, and use the up and down arrows to adjust the contrast to where you'd like.

Alerts

If you would like to know when a certain parameter reaches a specified value, you can set an alert for that parameter by following these steps:

1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:

2. Select the *Alerts* option. The following screen appears:



3. By default, the alerts are off. To turn them on, select the *Alerts are Off* option and press [ENTER]. The text line will now read *Alerts are On*. To change the value of a certain alert, select the parameter you want to change and press [ENTER]. The screen similar to the following will appear:

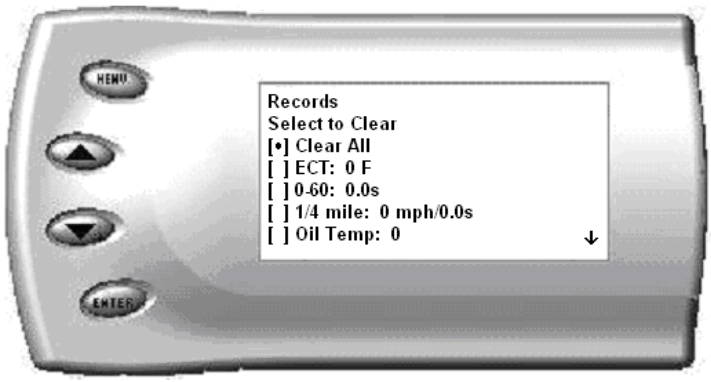
4. Press the [UP] and [DOWN] arrow keys until you have reached the desired value. Pressing [ENTER] will save the current alert value. If you would like to return to the previous screen and abort the current value change, press [MENU].
5. When alerts are On, and multiple alerts are detected, the Evolution will only display one. For example: if you exceed the set point for both MPH and RPM, the first alert the Evolution detects will be the one displayed. Pressing any button will temporarily disable the alert until the vehicle falls below the set point and then will automatically re-enable.

Records

The *Evolution* automatically records the highest value of some of the parameters. To view these records and to reset them, do the following:

1. From the *Main Menu* select the *Setup* option. The *Setup* screen appears as follows:

2. Select the *Records* option. The following screen appears:



3. This is where you can view all of the current recorded high values. The arrow located at the bottom right corner of the screen indicates there are more parameters than the display can show. Use the [UP] and [DOWN] arrow keys to scroll through the list of records. If you would like to reset a single parameter, select the desired parameter and press [ENTER]. If you would like to reset all of the records, select the *Clear All* option and press [ENTER]. To exit out of this list press [MENU].

Reset Evo Settings

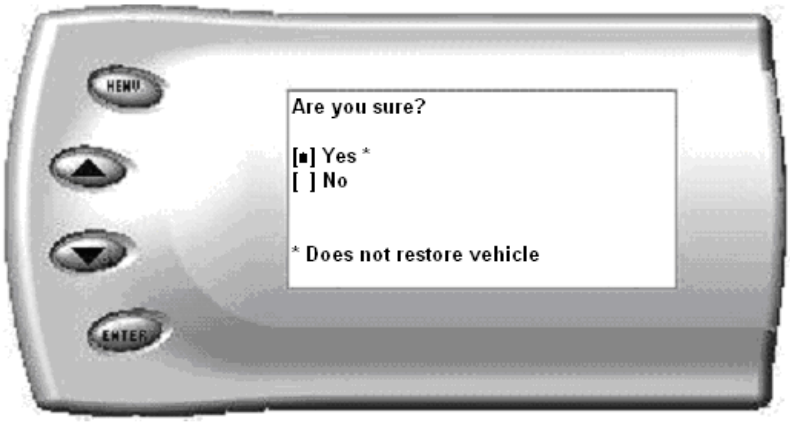
If you would like to restore the Evolution back to its original factory settings, follow these steps.

Note: *This will not program the vehicle back to stock power; it will only reset the Evolution display options, alerts and records back to the preset defaults from Edge Products. To reset power level, return to "Power Programming".*

1. Enter into the *Main Menu*. The *Main Menu* screen appears as follows:

2. Select ***Setup*** and press [ENTER]. The following screen will be shown:

3. Select *Reset Evo Settings* and press *Enter*. The following screen will be shown.



4. Select *Yes* and press *Enter*. The following screen will be shown.

5. The *Evolution* settings have now been reset to match the settings as originally purchased and supplied from Edge Products. Press [MENU] to return to the *Main Menu*.

Fusion® PC Software

Internet Connection Required to Update

Fusion® Software allows the user to update their device to the latest version of firmware and calibration files. It can be downloaded for free from Edge Products web site at www.edgeproducts.com.

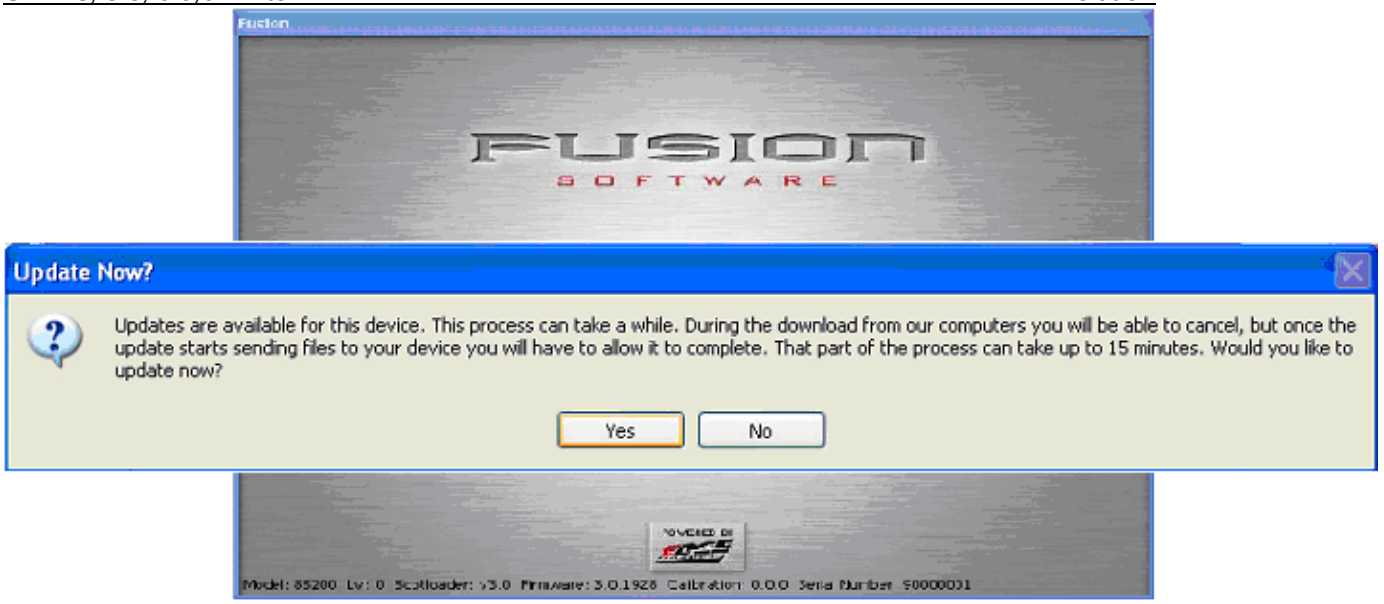
Note: *Be sure to install both the SOFTWARE and the DRIVERS that come included in the download before you connect your device to your PC. During the installation you will be prompted to install the drivers, choose yes.*

For step by step installation instructions please copy this link into your web browser
http://www.edgeproducts.com/product_images/product_update-file-11.pdf

Once you've successfully installed the Fusion Software and Drivers, click on the Fusion icon on your PC desktop. You may be prompted for a Fusion login. If you have not yet created an account, click on "Create a New User" and you will be taken to a webpage to create your login information. After entering your information, a password will be sent to the email address you provide. Please be sure that your email account does not block emails from "edgeproducts.com". Upon receiving the password, enter your email address and password into the login screen. You'll be prompted to connect the device to launch the update. After connecting the device, you'll see the following screen. Click yes to continue with the update.

Note: *Be sure to return your vehicle to stock before connecting the device to Fusion.*

Note: *If the USB connector you received has 2 plugs, it is recommended that you plug both USB connectors into the computer before connecting the device to the other end to ensure proper operation.*


Fusion
FUSION
SOFTWARE
Update Now?
Updates are available for this device. This process can take a while. During the download from our computers you will be able to cancel, but once the update starts sending files to your device you will have to allow it to complete. That part of the process can take up to 15 minutes. Would you like to update now?
Yes
No
POWERED BY
Model: 85200 Lv: 0 Bootloader: v3.0 Firmware: 3.0.1926 Calibration: 0.0.0 Serial Number: 50000031

After you've selected yes on the previous screen the Fusion software will go through the steps in order to update the device. Once it's completed you'll see the following screen

Fusion
FUSION
SOFTWARE
The next time you connect your device to your vehicle please allow up to 2 minutes for the device to come up.
Press the OK button to close Fusion then disconnect your device.
OK
POWERED BY
Model: 85200 Lv: 0 Bootloader: v3.0 Firmware: 3.0.1926 Calibration: 0.0.0 Serial Number: 50000031

Click OK and the update will be completed. You'll now have the latest Firmware, and Calibration on your device.

When your device is connected to Fusion, the Device Model, Level, Boot-loader, Firmware, Calibration and Serial Number are all displayed at the bottom of the screen. These numbers will be useful to quickly view the state of your device, and whether or not it is currently programmed to a vehicle.

MODEL: The model number for your device

LVL: The currently programmed level

BOOTLOADER: The bootloader version currently on your device

FIRMWARE: The firmware version currently on your device

CALIBRATION: The calibration version currently on your device

SERIAL NUMBER: The serial number assigned to your device

Possible Programming Errors

Update Required

Fusion is designed to help the development team at Edge Products support new vehicle calibrations. When you connect your device to the vehicle, the first step it takes is identifying your vehicle's stock file. If the stock file isn't currently supported the device will display a screen alerting you that the stock file is not yet supported, and prompt you to press a button/touch the screen in order to read and save the stock file. Once the device has saved the stock calibration, it will prompt you to connect the device to Fusion. Fusion will ask you if you want to upload your vehicle's stock files to our server. Choosing yes will upload the files to the server, and alert the development team. This will help the development team at Edge Products provide support for your vehicle's calibration as quickly as possible.

Non Stock condition

During programming, the device will read the stock file on your vehicle and compare it to a corresponding stock file that has been verified by Edge Products. If there is a mismatch the device will alert you, and display this message,

"Non-stock condition detected. This is most likely because your vehicle has been programmed with a competitive product. It is recommended that you return your vehicle to a stock condition with the product that changed it. Alternatively, you can plug your device into the internet update system and it will load the necessary files onto your device to return your vehicle to stock."

If you don't have the competitive product that programmed your truck, connect the device to Fusion where you'll be prompted to download the correct stock files. Once downloaded, simply connect the device to your vehicle, and the device will program the verified stock files to your vehicle.

Troubleshooting/Tips

Tip: Programming your vehicle may expose existing defects in your vehicle's PCM that could disable your vehicle. It is advised that you do not program your vehicle in remote locations in case of failure.

Tip: Keep in mind that the *Evolution* is a high performance product and that not all vehicles deliver the exact same power output when programmed with the *Evolution*. It is recommended that you select a program that will best fit your needs. Whether towing, or traveling long distances at high speeds, choose your power level wisely and keep in mind the condition and tolerances of your vehicle when selecting a suitable power level.

- **NO DISPLAY WITH KEY ON –** If you should get no display when turning the key on, check all of your fuses and make sure your battery is fully charged. Disconnect and reconnect the OBD-II cable to ensure the Evolution restarts properly. If the unit restarts but fails to stay on, or fails to turn on when the key is on, there is most likely a communications issue. Contact Edge Products Technical Support for further assistance.
- **NO START –** If you experience a "No-Start" condition after programming your PCM, return to the *Power Programming* menu and select *Return to Stock*. This will allow the *Evolution* to reprogram the PCM with the factory calibration and recover the PCM. If, after reprogramming, you still have a "No-Start" condition, contact Edge Products Technical Support. A member of our support team can further instruct you on possible recovery procedures.

Commonly Used Acronyms

ACT = Air Charge Temp
ACV = Thermactor Air Control Sensor
AOD = Automatic Overdrive Transmission
APP = Accelerator Petal Position
AXOD = Automatic Overdrive Transmission
BAT = Battery Voltage
BCM = Body Control Module
BOO = Brake On/Off Switch
BP = Barometric Pressure Sensor
CCD = Computer Controlled Dwell
CCO = Converter Clutch Override
CDR = Crankcase Depression Regulator
CEL = Check Engine Light
CFI = Central Fuel Injection
CHT = Cylinder Head Temperature
CID = Cylinder Identification Sensor
CKP = Crank Position Sensor
CMP = Cam Position Sensor
CPS = Crankshaft Position Sensor
DTC = Diagnostic Trouble Codes
ECA = Electronic Control Assembly
ECM = Electronic Control Module
ECT = Engine Coolant Temp
EDF = Electric Drive Fan Relay
EDIS = Electronic Distributor
EGO = Exhaust Gas Oxygen Sensor
EGR = Exhaust Gas Recirculation
EGRC = EGR Control Solenoid
EOT = Engine Oil Temperature
EVP = EGR Position Sensor
EVR = EGR Valve Regulator
FDM = Fuel Delivery Module
FPM = Fuel Pump Monitor
FRP = Fuel Rail Pressure
HEGO = Heated Exhaust Gas Sensor
IAT = Intake Air Temperature
ICM = Integrated Controller Module
IDM = Ignition Driver Module
ISC = Idle Speed Control
ITS = Idle Tracking Switch
IVS = Idle Validation Switch (Diesel)
KAM = Keep Alive Memory
KOEO = Key On Engine Off
KOER = Key On Engine Running
KS = Knock Sensor
LOAD = Engine Load
LOS = Limited Operation Strategy
LPD = Line Pressure Desired
LUS = Lock-up Solenoid
MAF = Mass Airflow
MAFV = Mass Airflow Sensor Voltage
MAP = Manifold Absolute Pressure
MAT = Manifold Air Temp
MCU = Microprocessor Control Unit
MIL = Malfunction Indicator Light
MPH = Miles Per Hour
OHC = Over Head Camshaft
OSS = Output Shaft Speed
PCM = Powertrain Control Module
PFE = Pressure Feedback EGR Sensor
PIP = Profile Ignition Pickup
PSPS = Power Steering Pressure Switch
RPM = Revolutions Per Minute
SES = Service Engine Soon
SIL = Shift Indicator Light
SPARK = Spark Advance/Retard
SPOUT = Spark Output Signal (from ECA)
STAR = Self Test Automatic Readout
TAPS = Throttle Angle Position Sensor
TCM = Transmission Control Module
TFI = Thick Film Ignition System
TFT = Transmission Fluid Temperature
TGS = Top Gear Switch
THS = Transmission Temperature Switch
TPS = Throttle Position Sensor
TQC = Torque Control
TSS = Turbine Shaft Speed
TTS = Transmission Temperature Switch
VAF = Vane Air Flow Sensor
VAT = Vane Air Temperature
VCT = Variable Cam Timing
VSS = Vehicle Speed Sensor
WAC = WOT A/C Cut-off Switch
WOT = Wide Open Throttle

Technical Support:

888-360-3343

To expedite your support call, please have your Vehicle Information, Part Number, Serial Number, and Date of Manufacture ready prior to calling Technical Support. The *Edge Products* information is found on the label located on the bottom of the device.